

TESTIMONY OF F. PAUL RICHARDS

1
2
3 1. Q. Would you please state your full name, business address, and position
4 with respect to the petitioning company?

5
6 A. My name is Frederick Paul Richards. My business address is 55 Bearfoot
7 Road, Northborough, MA. I am a Principal Environmental Engineer in
8 the Environmental Group of the National Grid USA Service Company
9 which performs environmental and other services for the companies in the
10 National Grid System, of which the petitioner is one. Our Group is
11 responsible for the environmental studies and analyses which support the
12 engineering design, permitting and licensing of the subject project.
13

14 2. Q. What are your professional qualifications?

15
16 A. I have a Masters Degree in Marine Biology and have been an
17 environmental consultant/environmental engineer for over 30 years. I
18 have published or presented numerous papers at scientific meetings and
19 environmental conferences. Currently I am a member of the Society of
20 Wetland Scientists and the Association of Massachusetts Wetland
21 Scientists. I serve as a member of the Princeton Conservation
22 Commission.
23

24 3. Q. Have you previously testified and given a statement of your qualifications
25 in proceedings before the Department?

26
27 A. Yes, I have done so in the following proceedings ---- Risingdale, 23kV
28 lines, DPU 95-57; the Quincy Cable Project, DPU 97-98/97-99 and EFSB
29 97-3; Golden Rock 115kV line extension, DTE 99-70 and the Westford
30 #57 Substation, DTE 01-77.
31

1 4. Q. What was your responsibility for this project?

2

3 A. I have been responsible for working with the engineers and consultants in
4 developing an environmental assessment for the proposed new Bay #5 and
5 capacitor banks as well as ancillary structures at our Salem Harbor
6 Switchyard (Switchyard).

7

8 5. Q. How did you evaluate the potential environmental impact of the proposed
9 project?

10

11 A. I evaluated the proposed project in light of the land use/environmental
12 elements of the Department's Checklist for Filing of Zoning Exemptions.
13 Specifically I considered land use, wetlands, water resources, visual
14 resources, noise, traffic and access, public safety, air pollutant emissions,
15 and hazardous substances.

16

17 6. Q. Were the data and responses prepared by you or by others working under
18 your supervision or direction?

19

20 A. Yes.

21

22 7. Q. Please provide your testimony relative to the items associated with the
23 Department's Checklist.

24

25 A. I will answer in the order presented in the Checklist. I will first describe
26 the existing conditions for each item followed by my assessment of
27 impact.

28

29 **Existing Conditions**

30

1 *Land Use*---The Salem Harbor Switchyard's proposed Bay #5/Trench/Capacitor Bank
2 site (the Site) is located on a peninsula between Salem Harbor and Collins Cove. The
3 proximate land use surrounding the existing Switchyard consists of the generating station
4 itself, a tank farm, the wastewater treatment works and a residential neighborhood
5 (northwesterly about 250 ft). The Site footprint will be on land currently serving as a
6 small portion of a much larger existing parking lot for the power plant.

7
8 *Wetlands*---There are no wetlands or wetland resource areas located at or near the Site as
9 defined under the MA Wetlands Protection Act or the City's wetland bylaw. The nearest
10 coastal feature and associated flood plain is the harbor several hundred feet away.

11
12 *Water Resources*---Salem and Beverly harbors are the largest water bodies near the Site.
13 There are no other surface water bodies in the vicinity of the Switchyard.

14
15 *Visual Resources*---The viewshed is dominated by the power plant, tank farm and
16 wastewater treatment plant. The views in the direction of the Site will be greatly
17 influenced by these existing features. Presently, there is a wooden stockade fence, a row
18 of arbor vitae and other ornamental shrubs, and tall deciduous trees (about 30 ft tall)
19 between the abutting neighborhood (5 residences face the generating station) and the
20 parking lot.

21
22 *Noise Environment*---The Site currently has ambient background noise associated with
23 the commercial, industrial and residential activities in the area. Vehicular noise and
24 power station noise are the dominant components.

25
26 *Traffic and Access*---The main roads to the site are Derby and Fort streets. There are
27 several other commercial/residential streets on the Salem Neck peninsula. The other
28 major roads in the area are Bridge Street, Rt. 114 (Lafayette Street), and Essex Street.
29 Salem is noted for its tight streets and heavy traffic volume. Fort Street, the main
30 thoroughfare, leads to Salem Willows Park.

1

2 *Public Safety Considerations*---Public safety is assured because power plant site is
3 vehicular and pedestrian access-controlled by a manned guard house. The equipment
4 proposed for the Site is behind an interior fence.

5

6 *Air Pollutant Emissions*---The Salem Harbor power station has air emission
7 considerations which are beyond the scope of this existing environmental setting
8 discussion for the proposed Site.

9

10 *Use of Hazardous Substances*---Sulfur hexafluoride (SF 6) is defined as hazardous by the
11 U. S. Dept. of Transportation. It is a gas used to insulate circuit breakers in a substation.
12 Its hazard risk stems from being an asphyxiate by displacing oxygen in the lungs when
13 breathed. It is a colorless, odorless, nontoxic, and nonflammable gas and is shipped as a
14 liquefied gas.

15

16 **Impact Assessment**

17

18 *Land Use*---The current land use will be maintained. Proposed equipment for the Site is
19 consistent with the existing, surrounding Switchyard equipment. Therefore there is no
20 proposed change in land use.

21

22 *Wetlands*---There are no wetlands or wetland resource areas in the vicinity of the Site and
23 therefore there will be no impact.

24

25 *Water Resources*---There will be some limited runoff from the Site when asphalt is
26 removed and soils are exposed during construction. The construction foot print will be
27 approximately 7,000 sq ft. Discharge will be controlled by using erosion control wood
28 chip bales, if necessary, to impede runoff. If dewatering is required at any of the
29 foundation locations, the resultant discharge will be to a lined haybale corral or to a
30 wetlands filter bag in order to prevent sediment migration offsite.

1

2 *Visual Resources*---There will be virtually no impact to visual resources as the proposed
3 Bay #5 and capacitor banks are in keeping with the general equipment profile and height
4 already in place at the existing Switchyard. That coupled with the existing screening
5 negates any significant change in the existing viewshed.

6

7 *Noise*---Additional noise generated at the Site will be short term and associated with the
8 construction phase of the project. For example, the asphalt will be cut and removed.
9 Backhoes and similar equipment will excavate for foundations. Truck traffic will bring
10 cement, structural and electrical equipment to the site. All these temporary noises will
11 occur during the daytime construction window as dictated by DEP and Salem noise
12 regulations. The same vegetative and structural features separating the neighborhood
13 from the power plant currently will also serve to attenuate the temporary noise impact.
14 The heavy equipment part of construction is approximated to last about 6 months.

15

16 *Traffic and Access*---The proposed project will not generate significant vehicular traffic
17 nor change access to the Site. At any given time there are anticipated to be about 8
18 persons onsite associated with construction. Since the Switchyard is unmanned, there
19 will be no added Operations and Maintenance (O & M) personnel traveling to the Site
20 once construction is completed.

21

22 *Public Safety Considerations*---As noted previously the power plant site is secured. The
23 proposed project will be enclosed within its own fencing.

24

25 *Air Pollution Emissions*---The equipment being installed is not a source of air pollutants.
26 There are no air quality regulations or controls for capacitors and breakers.

27

28 *Use of Hazardous Substances*---Although SF 6 is defined as hazardous by DOT, there is
29 no risk of general public exposure. The Switchyard is not enclosed but open to the air.
30 Thus there is no opportunity for SF 6 to concentrate and become a threat in displacing

oxygen either to workers or to the general public. The breakers are located in a chain-linked fenced yard. They are installed and maintained by trained technical staff. They are checked for integrity during inspections by company personnel.

8. Q. Does the proposed project exceed triggers for MEPA review?

A. No. The MEPA regulations at 301 CMR Section 11.03 define review thresholds pertaining to MEPA review at either the Environmental Notification Form or Environmental Impact Report levels. Concurrent with exceeding a MEPA threshold, an applicant's project must also require a state permit or approval related directly to the threshold activity.

The zoning exemption sought in this proceeding is not tied to any MEPA threshold described below. Furthermore, in the case of the proposed new Bay 5 and capacitor banks associated with the Salem Harbor Switchyard, the project is below the following MEPA thresholds:

- 1) Land---There are no changes affecting the seven MEPA triggers.
- 2) Rare Species---The area is a Switchyard and parking lot.
- 3) Wetlands, Waterways and Tidelands---No applicable resources are affected in the Switchyard or parking lot.
- 4) Water---The project has no water requirements, nor does it affect nearby estuarine waters.
- 5) Wastewater---There is no wastewater associated with the project.
- 6) Transportation---There are no transportation issues associated with the project.
- 7) Energy---There are no new transmission lines associated with the project.
- 8) Air---There are no air emissions associated with the project.
- 9) Solid and Hazardous Waste---There are no solid or hazardous wastes associated with the project.

1 10) Historical and Archaeological Resources---The Site is highly disturbed currently,
2 as it is being used as a Switchyard and parking lot.

3 11) Areas of Critical Environmental Concern---The Site is not in an ACEC.

4 12) Regulations---Not applicable.
5

6 9. Q. What environmental permits are needed by the Project?
7

8 A. None. Based on my analysis of the Site location, construction and
9 operation along with consideration for factors associated with permitting, I
10 reached the following conclusions:
11

12 1. Wetlands Protection Act---Not applicable, no wetlands or buffer zone affected.

13 2. Salem Wetlands Protection Bylaw---Not applicable, same as above.

14 3. Chapter 91---Not applicable, not on filled tidelands.

15 4. MEPA---Not applicable, no review threshold exceeded.

16 5. US EPA NPDES Storm Water---Not applicable, less than 1 acre disturbance.

17 6. Corps Section 404---Not applicable, no wetland fill.

18 7. MA DEP Section 401---Not applicable, no wetland fill.

19 8. Article 97---Not applicable, no public open space affected.
20

21 B. Other Environmental Considerations
22

23 1. Spill Prevention, Control and Countermeasure Plan ---The existing Spill
24 Prevention, Control and Countermeasure Plan for the Switchyard will be revised.

25 2. MA Contingency Plan---Not applicable, although National Grid has to test any
26 excess soils prior to shipment offsite.
27
28

29 10. Q. Does this conclude your testimony?
30

1 A. Yes, it does.